

## ABSTRACT OF THE DISCLOSURE

4 A precision locking BNC male connector mates without requiring twisting of the cable or  
multiple bends to accommodate the rotation of the BNC latch. The shell portion of the male connector  
6 that carries the adapter connector or cable clamp on one end and that is the male cylindrical shield at the  
other end, is free to rotate whenever the precision locking BNC male connector is not locked, whether  
8 or not it is mated with a female connector. A knurled sleeve is captive at a location along the male shell,  
but is free to rotate. The knurled sleeve has internal threads that engage external threads on a portion of  
10 the BNC latch. A radial friction device is in contact with both an external surface of the BNC latch and  
the internal surface of the knurled sleeve. When not engaged with the bayonet pins of a female  
12 connector, rotating the knurled sleeve will rotate the BNC latch also, by virtue of the friction device, but  
both will, as a unit, rotate freely relative to the shell. Once the bayonet pins engage the spiral portion of  
14 the slot in the BNC latch, the friction between the sleeve and the latch is sufficient to rotate the latch  
all the way into the detent. At that point the latch can turn no more, and further CW rotation of the sleeve  
16 by about three-quarters of a turn causes thread driven displacement of the male shell toward the female  
parts by about .030 inches. This applies the compression that produces the locked condition. To unlock  
18 the connectors the knurled sleeve is turned in the CCW direction. The friction device does not transmit  
enough torque to overcome the detent, which is also temporarily maintained by an anti-jam spring, so  
20 that the shell initially stays still as the knurled sleeve rotates about it, which undoes the thread-induced  
displacement until no more displacement in the other direction is possible, and further rotation is  
22 transmitted to the latch, which causes it to leave its detent and traverse the spiral over the bayonet pins  
to where they are opposite the entrance to the groove. A simple axial tug then separates the connectors.  
24 The friction device may be a neoprene washer held between two adjacent metallic washers.